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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/325,427	06/04/1999	MOTOFUMI KAKIUCHI	072982-0182	2796

7590

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EXAMINER

PHAN, MAN U

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 01/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
**09/325,427**

Applicant(s)  
**Kakiuchi**

Examiner  
**Man Phan**

Art Unit  
**2665**



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Jun 4, 1999
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 3, 4 6) ☐ Other:

### **DETAILED ACTION**

1. The application of Kakiuchi for a "System and Method for high-capacity electronic switching" filed 06/04/1999 has been examined. Claim 1-35 are pending in the application.

#### ***Priority***

2. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan - 10-158193 on 06/05/1998. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Regarding claims 8 and 9, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-10 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ardon (US#4,943,999) in view of Franklin et al. (US#5,093,827).

With respect to claims 1 and 13, Ardon discloses a high- capacity electronic switching system comprising: two or more first stage switch modules (200, 201, 202) to each of which one or more subscriber terminals (23, 24, 25, 26) are connected and each of which executes signal switching for signals from/to the subscriber terminal (Fig. 1, Col. 4, line 67 to Col. 5, line 8); a second stage switch module (10) for receiving a signal outputted by one of the first stage switch modules via a line (13, 14), switching the signal, and thereby outputting the signal to another one of the first stage switch module via a line (15, 16) (Fig. 1; Col. 4, lines 18-25). Ardon does not expressly disclose each of the first stage switch modules is connected to another one of the first stage switch modules via a special-purpose link for setting a communication link between the first stage switch

modules when necessary. Franklin et al. (US#5,093,827) disclose a distributed control arrangement for a switching system includes a plurality of circuit-switching units (*switch modules 201s*) interconnected with each other and with the endpoints by at least one communication medium (*link connection between the switch modules*) (Fig. 2; Col. 4, lines 22-28).

Regarding claims 2 -3, and 14-15, Franklin disclose an arrangements for interconnecting switch modules, in which every two of the first stage switch modules (201s) are connected together by a line of the special-purpose link directly; the special purpose link connects the first stage switch modules so that communication links between every two first stage switch modules (201s) can at least be set via one or more lines of the special purpose link (Figs. 1 and 2; Col. 4, lines 25-32 and Col. 35, lines 21-23).

Regarding claims 4 , 8 and 16, 19, In so far as understood, Ardon teaches a stand alone operation between switching modules 201, 202 wherein the setting of the communication link via the special purpose link (211) is executed when an abnormal condition of the second stage switch module (10) occurred and normal communication link setting between two first stage switch modules (201, 202) via the second stage switch module (10) is impossible (Fig. 6; Col. 8, lines 9-20 and Col. 11, lines 50-59).

Regarding claims 5 and 17, Ardon teaches in Fig. 6 illustrated a switching system including a central control unit (30) for controlling the first stage switch modules (via CUs 17, 18) and the second stage switch module (10) (Col. 6, lines 36-40 and Col. 7, lines 55-58).

With respect to claims 6 and 18, Ardon disclose in Fig. 6 illustrated an

arrangement for interconnecting switch modules with inter-switch module trunks of a switching systems, in which the first control units (17, 18) for controlling the first stage switch modules (201, 202) and a second central control unit (30) for controlling the second stage switch module, and necessary control information is communicated between the central control units via a bus (Fig. 2; Col. 8, lines 45-49).

Regarding claim 7, In so far as understood, Ardon teaches that when a abnormal condition of the control bus is disconnected and the control information communication between the central control units via the control bus is impossible, the setting of the communication link via the special purpose link is executed (Col. 8, lines 9-20 and Col. 11, lines 50-59)

Regarding claims 9-10 and 20-21, Ardon further teach a communication switching arrangement for establishing communication paths, in which the special purpose link communicates analog and digital signals (Fig. 6; Col. 5, lines 8-12).

Regarding claims 24-29 and 30-35, they are method claims corresponding to the apparatus claims 1-10 and 13-21 above. Therefore, claims 24-29 and 30-35 are analyzed and rejected as previously discussed with respect to claims 1-10 and 13-21.

One skilled in the art would have recognized the need for interconnecting the first stage switch modules when the second stage switch module is unavailable for connections, and would have applied Franklin's teaching of the switch modules interconnected with each other by the communication medium into Ardon's novel use of a special-purpose link in a communication switching arrangement. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was

made to apply Franklin's control architecture of a multi-node circuit and packet switching system into Ardon's switching system reliability with the motivation being to provide a method and system for high-capacity electronic switching.

7. Claims 11-12 and 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ardon (US#4,943,999) in view of Franklin et al. (US#5,093,827) as applied to claims 1-10 above, and further in view of Hiraiwa et al. (US#5,333,187).

With respect to claims 11-12 and 22-23, these claims differ from the claims above in that the claims require the channel associated signaling and common channel signaling employed in the special-purpose link. However, using signaling information techniques in communication links (*connection signaling*) are known as narrowband signaling Channel Associated Signaling (CAS) and Common Channel Signaling (CCS). These are two types of interoffice signaling employed in present day network. In the same field of endeavor, Hiraiwa et al. (US#5,333,187) discloses a switching system which employs common channel signaling (CCS) and channel associated signaling (CAS) (Col. 2, lines 24-30).

One skilled in the art would have recognized the need for interconnecting the first stage switch modules when the second stage switch module is unavailable for connections, and would have applied Hiraiwa's teaching of the switching control system which employs common channel signaling and channel associated signaling, and Franklin's teaching of the switch modules interconnected with each other by the communication medium into Ardon's novel use of a special-purpose link in a

communication switching arrangement. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Hiraiwa's switching system for electronic switching, and Franklin's control architecture of a multi-node circuit and packet switching system into Ardon's switching system reliability with the motivation being to provide a method and system for high-capacity electronic switching.

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Tanimura et al. (US#6,470,011) is cited to show the time division multiplex highway switch control system and control method of T-S-T three stage switches in electronic switching system.

The Nagler et al. (US#5,014,264) is cited to show the circuit configuration for telecommunication switching systems, in particular PCM time division multiplex telephone switching systems with a central switching network and peripheral sub-switching networks connected to it.

The Seeger et al. (US#4,853,957) is cited to show the telecommunication switching systems with a central switching and local sub-switching.

The Ardon et al. (US#4,583,218) is cited to show the control communication in a switching system having clustered remote switching modules.

The Ardon (US#5,115,425) is cited to show the switching system reliability.



The Eom et al. (US#5,914,952) is cited to show the tributary unit signal cross-connection apparatus.

The Sakurai et al. (US#5,513,177) is cited to show the distributed switching system having at least one module.

The Back et al. (US#5,091,904) is cited to show the general signaling service unit of electronic switching system.

The Hemdal (US#4,022,982) is cited to show the apparatus for rearrangement of a switching network.

The Mattis et al. (US#4,754,480) is cited to show the circuit arrangement for telecommunication switching systems connected to line concentrator sub-exchanges by connecting channels.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (703)305-1029. The examiner can normally be reached on Mon - Fri from 6:30 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (703) 308-6602. The fax phone number for the organization where this application or proceeding is assigned is (703)305-3988.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

9. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:** (703) 872-9314, (for formal communications intended for entry)

**Or:** (703) 305-3988 (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021

Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Mphan

01/24/2003.

A handwritten signature in cursive script, appearing to read "Mphan", written in black ink.